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FOREST EXPERIENCES OF FIFTH-GRADE CHICAGO PUBLIC SCHOOL STUDENTS

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Urban children have various amounts and types of nature-related experiences in urban and rural environments. Some camp with their families; some go on scouting expeditions or other group events; some enjoy nature at nearby parks, rivers, vacant lots, or forest preserves; and others have had little contact with natural environments.

Through a Chicago Public School Program, fifth-grade youngsters from different cultures and backgrounds were brought together to experience and learn about a forest environment. The program—Academic Interest Center for Environmental Studies (AICES)—involved sessions in an urban forest located at North Park Village which is a 155-acre heavily wooded site offering both built up and natural environments.

Children entered the program with different backgrounds and varied forest experiences. To design programs to meet the children's particular needs, the AICES staff was interested in their perceptions and expectations concerning the forest. Therefore, prior to their North Park Village visit, the children filled out a brief questionnaire about their previous forest experiences. This report is an analysis of responses to that questionnaire. The results provide insight on the experiences, perceptions, and expectations of urban children in regard to forest resources. These insights are offered here to help direct other urban education programs that focus on forests and related natural resources. Furthermore, this analysis is offered to help guide urban forest resource managers in their efforts to make use of the strong educational value of urban forests. Environmental education programs focusing on the urban forest can increase children's understanding of ecosystems and enhance their use and enjoyment of the urban forest.

LITERATURE REVIEW

Similar studies with young children are rare, however, several studies have been conducted with older children and adults. In several studies, differences were found in the recreation preferences and behavior of Blacks and Whites (Washburne 1978, Wendling 1980). These differences appear to extend to use and perception of forest resources. Peterson (1977) reported that Black and female high school students are especially attracted to urban recreation areas. Fritschen (1980) found that urban nonwhites were more likely than urban Whites to prefer slide-tape nature programs that portray plants and animals found in the city. Other differences in nature-related attitudes were suggested by Dorsey (1972) who reported that White students exhibited greater understanding and reasoning in conservation concepts than Black students. Similarly, Kellert (1979) found low naturalistic and ecologistic attitudes among Blacks. In that same study, Kellert reported that females and Blacks had more negative attitudes toward animals, including more fear of wildlife, than did White males.

METHODS

An AICES teacher distributed questionnaires to students several weeks before they attended the learning sessions at North Park Village and prior to discussion of that visit. Consequently, the responses were not influenced by the AICES program. Children from 12 Chicago schools representing a cross section of the school system were given the questionnaire. The students ranged from 9 to 11 years of age.

Ten simple and straight-forward questions were asked concerning forest experiences, perceptions, and expectations. Most were open-ended to avoid influencing responses. Respondents were categoried by gender and race (Black, White, Hispanic, and Oriental). However, the number of Hispanic and Oriental students was small so we limited the analysis to the responses of Blacks and Whites. A total of 269 questionnaires, well distributed by gender and by Black or White, were used in the analysis. The analysis of differences in forest experiences, perceptions, and expectations among the students is limited by lack of information on the children's school, family, home environment, and the accessibility of forest resources. Such information would more fully explain student responses.

RESULTS

Previous Visits to a Forest

Three-fourths of the respondents had been to a forest or woodland prior to the AICES program. As shown in the following tabulation, a significantly (0.01) higher portion of Whites (87 percent) than Blacks (69 percent) had visited a forest.

Have you ever visited a forest?

Race	Yes	No
	(Number)	
Black	105	48
White	100	15

Within each race reported forest visits did not differ significantly between males and females.

Of those students who reported going to a forest, Whites indicated a significantly (0.01) greater frequency of visits than Blacks. Less than 20 percent of the Blacks who had been to a forest stated they had visited more than five times; whereas nearly 50 percent of the Whites were in the same category.

How many times have you been to a forest?

Race	1 to 5	6 or more
	(Number)	
Black	82	19
White	48	46

Visits by males and females in either group were not significantly different (0.05).

Students who had been to a forest were asked to identify the forest by name or location. The responses ranged from names of specific places to names of towns and States so they were aggregated by States, with Illinois divided into Chicago, the suburbs, forest preserves, and others. Blacks mentioned nearby urban forest areas more frequently than Whites, which is consistent with Washburne's (1978) findings that Blacks concentrate their recreation activity in urban settings.

Where are the forests that you have visited?

Forest location	Blacks	Whites
	(Number)[1]	
Illinois		
Forest preserves	30	22
Chicago	14	13
Suburbs	0	4
Other	11	22
Wisconsin	3	17
Michigan	11	6
Other States	22	22
Respondents	89	96

Students were then asked to identify with whom they usually visit the forest. All students reported going to the forest most frequently with their families. This finding corresponds with the results of Fritschen's (1980) study of Belle Isle Nature Center in Detroit, in which 70 percent of the visitors surveyed came to the center with their families. In the present study, only one difference was apparent between races. Approximately 18 percent of the Black students reported the school as the group they usually go with to the forest, while none of the White students gave that response.

Who do you usually go with to the forest?

Group	Blacks	Whites
	(Number)[1]	
Family	65	74
Scouts	16	15
Camp	31	16
School	33	0
Friends	36	32
Respondents	105	100

This difference can be attributed, in part, to the participation of some of the Black students in a federally funded program aimed at teaching outdoor education to inner-city youths. Also, the lower visitation rate to the forest by Black children may have increased the importance of school visits.

Enjoyment of the Forest

Students who had been in a woods or forest were asked whether or not they enjoyed the experience. More than 90 percent of the respondents indicated they had enjoyed being in the forest. Response differed little by race or gender.

[1] *Includes multiple responses.*

Students were asked why they did or did not enjoy their previous forest experiences. Although their responses were numerous and highly diverse, the most frequent responses for what they enjoyed about the forest are shown below:

Why do you like visiting the forest?

Reason for enjoying the forest	Blacks	Whites
	(Number)[1]	
Nature		
Plants	16	35
Animals	12	25
General	0	10
Activities		
Explore	16	11
Play	13	7
Picnic	5	4
Pleasing environment	13	29
It's fun	31	14
Respondents	91	96

Responses of Blacks and Whites were noticeably different. Blacks answered "it's fun" most frequently, whereas Whites answered plants and animals most frequently. Similarly, Whites frequently mentioned interest in nature and the related environment as a reason for enjoying the forest, and Blacks more frequently listed activities such as exploring and playing. These responses correspond, in part, to previous findings of lower understanding and reasoning in conservation (Dorsey 1972) and lower naturalistic and ecologistic attitudes among Blacks (Kellert 1979).

Only a few students, approximately the same proportion of Blacks and Whites, did not enjoy their forest experiences. The reasons most frequently cited were related to insects, fear of animals, fear of getting lost, and general "scariness."

Perceptions of Nonusers

As shown in the following tabulation, most of the students who had never been to a forest expected that they would enjoy such an experience.

Although you have never been to a forest, do you think you would enjoy such an experience?

	Yes	No
	(Number)[1]	
Blacks		
Males	15	3
Females	18	11
Whites		
Males	6	1
Females	7	0

Black females reported the least favorable expectations, with only 62 percent indicating they would enjoy a forest experience.

Students who had not been to a woods or forest were also asked why they thought they would or would not enjoy the experience. The most frequently mentioned reasons for perceiving enjoyment were simply that the students thought they "would like it" or because of the plants and animals. Other students reported they would like to see new things.

Out of the White students who had not been to a forest, only one male indicated that he would not enjoy a forest experience. Fourteen Black students had negative expectations of a forest—three-fourths of the negative comments were made by Black females.

It is interesting to note that Black students who had not visited a forest had expectations for the forest experience that were somewhat lower and more fear-oriented than the experiences reported by those who had visited a forest. This suggests that either a visit to the forest may alleviate such fears or that those who fear the forest did not go.

Previous Forest Experiences

When asked how they spend their time in the woods, most students reported they explore, walk, and hike. Blacks indicated more participation in sports and play activities than Whites who reported more exploration activities (table 1). White females indicated a particularly strong orientation towards exploration, and Black females indicated exploration more frequently than Black males.

The orientation of Blacks toward sports is consistent with much of the existing literature on racial/ethnic differences in recreation behavior (Wendling 1980). In this study the difference may be related, in part, to the higher reported use by Blacks of Chicago parks and Cook County Forest Preserves, which provide significant opportunities for recreation. Students frequently mentioned that they look at animals, which was also reported as a key reason for enjoying the forest experience.

Students were also asked what they learned from their previous experiences in a woods or forest. Most students reported that they learned about animals, reaffirming that animals are strongly associated with a forest experience. Fritschen (1980) stated that urban audiences prefer slide-tape programs about animals to those about plants. In the present study, Blacks reported that they learned about animals more often than Whites (table 2). All students reported that they learned outdoor skills while in the forest.

Table 1.—*How students reported spending their time in a forest*[1]
(In numbers)

Activity	Total	White			Black		
		Males	Females	Total	Males	Females	Total
Explore	87	18	33	51	14	22	36
Walk/Hike	59	20	14	34	10	15	25
Sports	56	19	4	23	22	11	33
Play	44	13	6	19	10	15	25
Camp	18	7	4	11	2	5	7
Observe animals	38	8	9	17	12	9	21
Observe plants	22	7	6	13	3	6	9
Enjoy outdoors	29	7	9	16	4	9	13
Respondents	203	54	46	100	46	57	103

[1]Includes multiple responses.

Table 2.—*What students reported learning in a forest*[1]
(In numbers)

Learned about in a forest	Total	White			Black		
		Males	Females	Total	Males	Females	Total
Nature							
Animals	59	13	10	23	13	23	36
Plants	44	18	12	30	5	9	14
General	30	11	10	21	7	2	9
Outdoor skills	49	12	11	23	15	11	26
Misc. Positive	42	15	7	22	11	9	20
Misc. Negative	8	0	1	1	1	6	7
Nothing	15	0	6	6	5	4	9
Respondents	194	51	44	95	47	52	99

[1]Includes multiple responses.

The highest frequency of negative comments about learning experiences were reported by Black females (table 2). This, plus the negative expectation of Black females who had not visited a forest, suggests that special consideration be given to this group in environmental education. Negative comments about learning experiences were also reported by White females and Black males but not by White males.

Fears

Because many children seem to have some fear of the woods (Devlin 1973, Kaplan 1976), the students were asked what they saw as a danger in the forest. As shown in the following tabulation, the most frequent response was animals and the second most frequent response was no fears.

What do you think are dangers in the forest?

Danger	Whites	Blacks
	(Number)[1]	
Animals	38	49
Nothing	18	21
Hazards	17	20
Fire	10	17
Plants	11	5
Debris	6	10
Respondents	98	105

As a frame of reference for the above question, al students, regardless of whether or not they had bee to a forest, were asked what they see as a danger i their neighborhood. Most students, except Blac males, most frequently reported no danger (table 3 Nevertheless, many responses of danger were re ported and significant differences were found by race Blacks reported many more types of danger tha

Table 3.—*Neighborhood dangers most often identified by fifth grade students*[1]
(In numbers)

Type of danger	Total	White		Black	
		Males	Females	Males	Females
Nothing	51	21	11	6	13
Assault	40	7	7	9	17
Cars	37	9	10	8	10
Killers	26	2	4	12	8
Fire	26	1	4	10	11
Fights	24	0	1	9	14
Dogs	23	5	3	8	7
People	22	4	6	3	9
Gangs	22	6	2	8	6
Guns	21	0	2	8	11
Rats	8	0	0	3	5
Respondents	256	57	53	62	84

[1]Includes multiple responses.

Whites. Whites most frequently mentioned cars and Blacks most frequently mentioned assault. Blacks often listed fire as a danger in both the forest and their neighborhood, suggesting that fears in various environments may be related.

SUMMARY

Urban forest managers and others involved in environmental education programs for fifth-grade youngsters in Chicago can expect that most of the children: (1) have been to an urban or rural forest with their family or another group, and (2) have enjoyed and learned from the experience, which usually involved walking or hiking. Most students who have not visited a woods or forest reported that they would enjoy such an experience.

Previous forest/woodland experiences of fifth graders differ by gender and ethnic background. A larger portion of Whites than Blacks had visited the forest, and Whites also reported more visits. School groups were a more common contact with the forest for Blacks than for Whites. Blacks, particularly Black females, emphasized the "fun" and "play" aspects of the forest, whereas Whites emphasized the natural qualities. This correlates, in part, with findings in other studies of less interest in nature, conservation, and animals by Blacks and females. Black females cited the negative aspects of the forest environment and reported learning nothing from a forest experience more often than any other group. Perhaps they should be given additional orientation to the forest as part of an environmental education experience.

Most students feel safe in the forest as well as in their own neighborhood, although Blacks reported a larger number of dangers in each environment. Some evidence suggests that fears in home and forest environments are related. For example, Blacks often cited fire as a threat in both environments. And Blacks reported a significant fear of dogs and rats in their home environment. This fear may be transferred to a fear of animals in the forest.

When developing environmental education programs for fifth graders it is not enough to study only the children's reactions to the forest. We must also study their home environment to: (1) relate the education program to concepts the children can understand, and (2) comprehend children's reactions to the material being presented. An example is "Nature City" in which aspects of the forest are translated into urban concepts and language (Lewis 1975).

In this study, we emphasized urban forests. With environmental educational programs tailored to fit their backgrounds and needs urban children can develop a better understanding of the natural environment and increase their enjoyment of urban forests.

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Analyzes previous visits to a forest and the associated experiences, as well as the expectations of those who had not previously visited a forest. Recommends educational programs that focus on the urban forest.

KEY WORDS: Urban, forestry, environment, education, interpretation.

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